

IN THE CLAIMS

Following is a complete set of all pending claims as they appear in the CPA filed October 30, 2002, by incorporation of the Response filed September 30, 2002.

CLEAN VERSION OF PENDING CLAIMS

- 1 1. (Amended) A method for preserving frame order of a plurality of frames transmitted over  
2 a plurality of communication links, the method comprising:  
3 receiving the plurality of frames transmitted over the plurality of communication links;  
4 asserting a plurality of indications each denoting the start of frame transmission on a  
5 corresponding communication link;  
6 for each indication being asserted, generating a corresponding pointer value associated  
7 with the respective frame being transmitted over the corresponding communication link  
8 based, at least in part, on a relative order in which the respective indication is asserted,  
9 the corresponding pointer value associated with each respective frame being used to  
10 determine an order in which the respective frame is promoted from a receive buffer to a  
11 system state.
- 1 2. The method of claim 1, further comprising:  
2 reading the received frames out of the buffer based, at least in part, on the pointer value.
- 1 3. The method of claim 2, wherein the frames are read out of the buffer in an increasing  
2 pointer value order.
- 1 4. The method of claim 1, wherein the indication is an analog indication.
- 1 5. The method of claim 4, wherein the data network is an Ethernet network and the  
2 indication is a receive data valid (RX\_DV) signal.

1 6. The method of claim 1, wherein the plurality of frames are a plurality of frame sizes.

1 7. (Amended) The method of claim 1, comprising storing records in the buffer in an order  
2 which does not correspond to the order of frame transmission of the records.

2 8. (Amended) The method of claim 1, further comprising reading the plurality of frames out  
3 of the buffer in accordance with their pointer value, in an order different from an order in which  
3 the frames are stored in the buffer.

1 9. (Amended) An apparatus comprising:  
2 a buffer having a plurality of records; and  
3 a network interface, coupled to the buffer, to receive a plurality of frames from a plurality  
4 of communication links, to store the frames in the corresponding plurality of records within the  
5 buffer in order of receipt, and to assign a pointer value to each of the plurality of records denoting  
6 a relative order of frame transmission of each of the plurality of frames, the pointer value  
7 associated with each record in the buffer being used to determine an order in which the  
8 corresponding frame is promoted from the buffer to a system state.

1 10. The apparatus of claim 9, wherein the network interface receives, for each of the plurality  
2 of communication links, an indication denoting the commencement of frame transmission to  
3 assign the pointer value.

1 11. The apparatus of claim 9, wherein the plurality of communication links are part of an  
2 Ethernet network.

1 12. (Amended) The apparatus of claim 10, wherein the indication is an analog indication.

1 13. The apparatus of claim 12, wherein the indication is an asserted receive data valid signal.

1 14. The apparatus of claim 9, wherein the network interface promotes frames stored in the  
2 plurality of records of the buffer to a system state in order of pointer value.

1 15. (Amended) In a data network, a method for preserving frame order of a plurality of  
2 frames transmitted across a multi-link trunk, the method comprising:  
3 receiving up to a plurality of indications denoting commencement of frame transmission  
4 on the multi-link trunk; and  
5 assigning a plurality of pointer values to a corresponding plurality of records in a buffer  
6 receiving the corresponding plurality of transmitted frames based, at least in part, on a relative  
7 order in which the indications are received, the pointer values associated with the records being  
8 used to determine an order in which the corresponding frames are promoted from the buffer to a  
9 system state.

1 16. The method of claim 15, wherein the multi-link trunk is comprised of a plurality of  
2 physical links aggregated as a single logical link.

1 17. The method of claim 15, wherein the indications are an analog signal denoting receive  
2 data valid.

1 18. The method of claim 15, further comprising promoting the received frames from the  
2 buffer based on pointer value order.

1 19. (Amended) A network device to communicate with other network devices through a  
2 multi-link trunk, the network device comprising:  
3 a buffer having a plurality of records; and  
4 a network interface, coupled to the buffer and the multi-link trunk, to receive a plurality  
5 of data frames from the multi-link trunk, store the frames in the corresponding plurality of  
6 records in the buffer, and to assign a pointer value to each of the plurality of records denoting the  
7 relative order of frame transmission commencement of each of the plurality of frames, the  
8 pointer value associated with each record being used to determine an order in which the  
9 corresponding frame is promoted from the buffer to a system state.

1 20. The network device of claim 19, wherein the multi-link trunk is comprised of a plurality  
2 of physical links.

1 21. The network device of claim 20, wherein the network interface receives, for each of the  
2 plurality of physical links comprising the multi-link trunk, an indication denoting the  
3 commencement of frame transmission on each physical link, and uses the indication to assign  
4 pointer values.

1 22. (Amended) The network device of claim 19, wherein the network interface promotes  
2 each of the plurality of frames stored in the buffer to a system state in order of pointer value,  
3 irrespective of an order in which they are stored in the buffer.